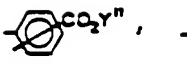
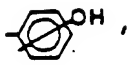
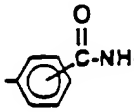
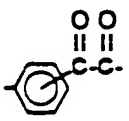
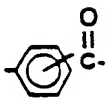
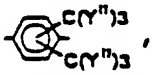
R_1 is a bond,  ,  ,  ,  ,  ,  ,  , or  wherein X is a halogen and Y is an alkyl group and wherein  indicates bonding to R_2 at any position and  indicates bonding to R_2 and the substituent at any position; and

R_2 is a bond, $-(CY'_2)_n^-$, $-(CY'_2-CY'=CY')_n^-$, $-(CY'_2-CY'_2-CH=CH)_n^-$, $-(CY'=CY')_n^-$, or $-(CY'_2-\overset{O}{\overset{\|}{C}})_n^-$, wherein Y' is hydrogen or an alkyl group and wherein n is 1 to 8; and

R_3 is -Y", -OH, $-NH_2$, $-N^+(Y")_3$, -COOH, $-COO^-$, $-SO_3H$, $-SO_3^-$, $-C-PO_3H_2$ or $-C-PO_3H^-$, wherein Y" is an alkyl group.

In Fig. 1B

each R_1' is independently a bond,  ,  ,  ,  ,  ,  ,  ,  or  , wherein Y" is an alkyl group, and wherein  indicates bonding to R_2' at any position and  indicates bonding to R_2' and the R_1' phenyl substituent at any position;

each R_2' is independently a bond, or $-(CH_2)_n-$ wherein n is 1-4,

each R_3' is independently -Y", -Y'", -H, -OH, -OY", $-NO_2$, -CN, $-NH_2$, -COOH, -COY", $-COO^-$, or a heterocyclic group, wherein Y" is as defined above and Y'" is a primary, secondary, tertiary or quaternary amine.

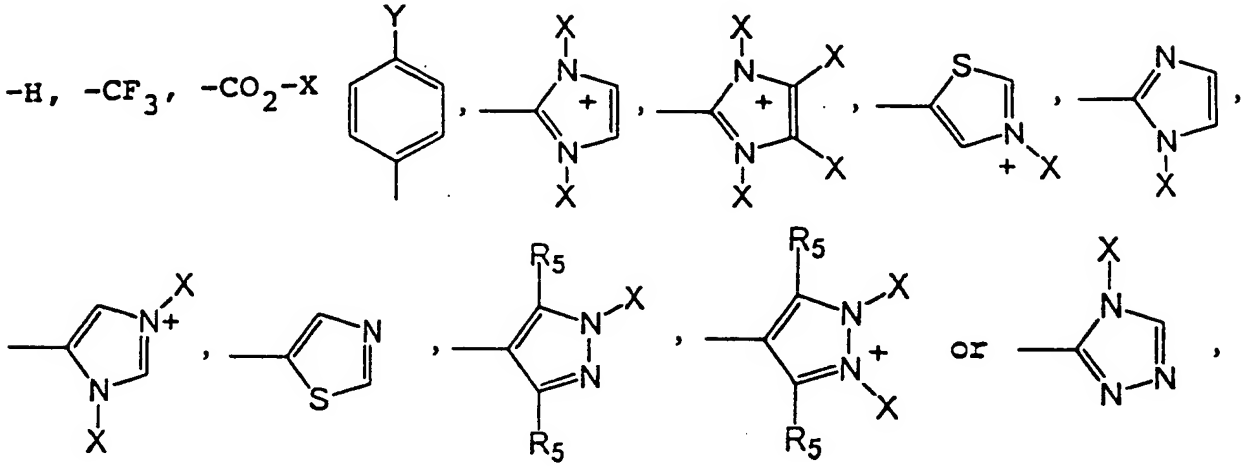
In Fig. 1C

R_1 through R_8 are, independently, -H, alkyl, 2-hydroxyalkyl, methoxyalkyl, halogen, nitro, cyano, trialkylammonium, formyl, amide of carboxylic acid, alkyl ester of carboxylic acid, carboxylic acid, glucuronyl or glyceryl ester of carboxylic acid, 1,2-dihydroxyalkyl, acetyl, vinyl, glycosyl or, taurate, and

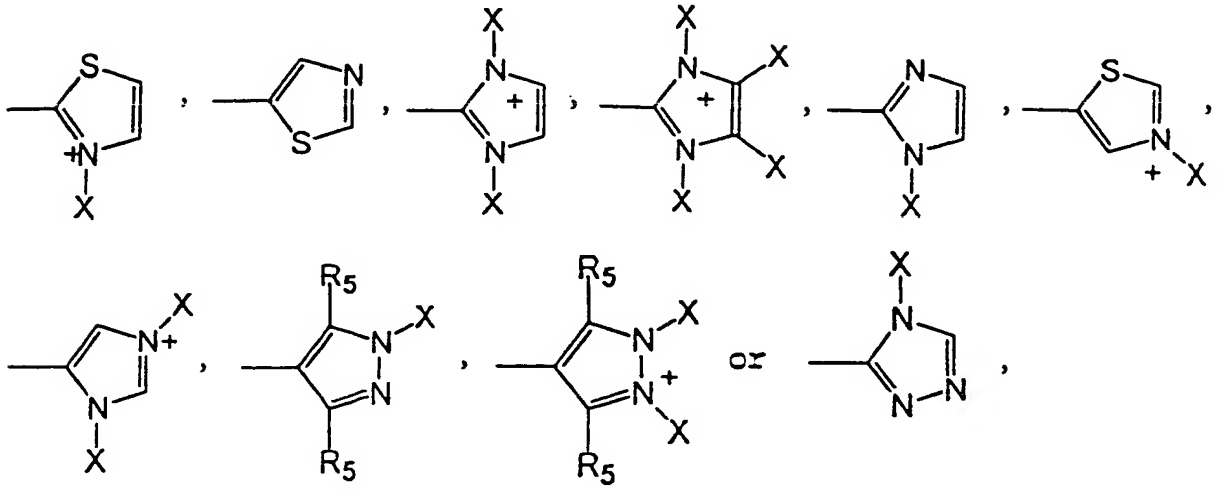
β, γ and δ are, independently, -H, acetyl, glycyl, benzoate, phenylsulfonate, 2-, or 3-, or 4-N-alkyl-pyridyl, nitrophenyl, halophenyl, methoxyalkyl, halogen, nitro, cyano, trialkylammonium, formyl, amide of carboxylic acid.

With reference to Fig. 1C, mimetics of the invention can be of Formula I or Formula II, or dimeric forms thereof., an example of a dimeric form being shown in Fig. 1D. In Fig. 1E

R_1 and R_3 are the same and are:



R_2 and R_4 are the same and are:



Y is halogen or $-CO_2X$,
each X is the same or different and is an alkyl and
each R_5 is the same or different (preferably the same) and is H or alkyl.

In Fig. 1F

R_1 and R_3 are, independently:

$-CO_2C_{1-4}$ alkyl; or

$-CO_2(CH_2)_nCX_3$, wherein X is halogen and n = 1 to 3;

R_2 is:

-H

$-C_{1-4}$ alkyl

-COOH

$-CO_2C_{1-4}$ alkyl,

$-CO_2(CH_2)_nCX_3$, wherein X is halogen and n = 1 to 3,

$-CON(CH_3)_2$, or

$-CX_3$, wherein X is halogen; and

R_4 is:

-H,

$-C_{1-4}$ alkyl

-COOH,

$-CO_2C_{1-4}$ alkyl,

$-CO_2(CH_2)_nCX_3$, wherein X is halogen and n = 1 to 3,

$-CON(CH_3)_2$, or

$-CX_3$, wherein X is halogen.

In Fig. 1G each R is, independently, a C_1-C_8 alkyl group, and each P is, independently, an electron withdrawing group or hydrogen.

With reference to Fig. 1H, the SOD activities of certain of the depicted compounds are shown in Table 1 (as measured by the cytochrome C method):

Table 1.

Compound	SOD activity (U/mg)
10110	225
10113	10,648
10123	17,061
10143	14,038
10150	14,789
10153	23,467
10158	14,342
CuZn-SOD	2,200